

Side Effects of Head and Neck Radiation

Almost all patients who have radiation therapy to the head and neck area develop oral side effects. That is why it is important to get the mouth in good condition before cancer treatment begins. Seeing a dentist two weeks before cancer treatment begins gives the mouth time to heal after dental work.

The side effects of radiation therapy depend mainly on the amount of radiation given. Some side effects in the mouth go away after radiation treatment ends, while others last a long time. A few side effects (such as dry mouth) may never go away.

Radiation therapy may cause some or all of these side effects:

- **Dry mouth:** Dry mouth can make it hard for you to eat, talk, and swallow. It can also lead to tooth decay. You may find it helpful to drink lots of water, suck ice chips or sugar-free hard candy, and use a saliva substitute to moisten your mouth.
- **Tooth decay:** Radiation can cause major tooth decay problems. Good mouth care can help you keep your teeth and gums healthy and can help you feel better.
 - Doctors usually suggest that people gently brush their teeth, gums, and tongue with an extra-soft toothbrush and *fluoride* toothpaste after every meal and before bed. If brushing hurts, you can soften the bristles in warm water.
 - Your dentist may suggest that you use fluoride gel before, during, and after radiation treatment.
 - It also helps to rinse your mouth several times a day with a solution made from 1/4 teaspoon baking soda and 1/8 teaspoon salt in one cup of warm water. After you rinse with this solution, follow with a plain water rinse.
- **Sore throat or mouth:** Radiation therapy can cause painful ulcers and inflammation. Your doctor can suggest medicines to help control the pain. Your doctor also may suggest special rinses to numb the throat and mouth to help relieve the soreness. If your pain continues, you can ask your doctor about stronger medicines.
- **Sore or bleeding gums:** It is important to brush and floss teeth gently. You may want to avoid areas that are sore or bleeding. To protect your gums from damage, it is a good idea to avoid the use of toothpicks.
- **Infection:** Dry mouth and damage to the lining of the mouth from radiation therapy can cause infection to develop. It helps to check your mouth every day for sores or other changes and to tell your doctor or nurse about any mouth problems.
- **Delayed healing after dental care:** Radiation treatment may make it hard for tissues in the mouth to heal. It helps to have a thorough dental exam and complete all needed dental treatment well before radiation therapy begins.

- **Jaw stiffness:** Radiation can affect the chewing muscles and make it difficult for you to open your mouth. You can prevent or reduce jaw stiffness by exercising your jaw muscles. Health care providers often suggest opening and closing the mouth as far as possible (without causing pain) 20 times in a row, 3 times a day.
- **Denture problems:** Radiation therapy can change the tissues in your mouth so that dentures do not fit anymore. Because of soreness and dry mouth, some people may not be able to wear dentures for as long as one year after radiation therapy. After the tissues heal completely and your mouth is no longer sore, your dentist may need to refit or replace your dentures.
- **Changes in the sense of taste and smell:** During radiation therapy, food may taste or smell different.
- **Changes in voice quality:** Your voice may be weak at the end of the day. It may also be affected by changes in the weather. Radiation directed at the neck may cause your *larynx* to swell, causing voice changes and the feeling of a lump in your throat. Your doctor may suggest medicine to reduce this swelling.
- **Changes in the *thyroid*:** Radiation treatment can affect your thyroid (an organ in your neck beneath the voice box). If your thyroid does not make enough *thyroid hormone*, you may feel tired, gain weight, feel cold, and have dry skin and hair. Your doctor can check the level of thyroid hormone with a blood test. If the level is low, you may need to take thyroid hormone pills.
- **Skin changes in the treated area:** The skin in the treated area may become red or dry. Good skin care is important at this time. It is helpful to expose this area to the air while protecting it from the sun. Also, avoid wearing clothes that rub the treated area, and do not shave the treated area. You should not use lotions or creams in the treated area without your doctor's advice.
- **Fatigue:** You may become very tired, especially in the later weeks of radiation therapy. Resting is important, but doctors usually advise their patients to stay as active as they can.

Although the side effects of radiation therapy can be distressing, your doctor can usually treat or control them. It helps to report any problems that you are having so that your doctor can work with you to relieve them.